201-14828

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October 27, 2003

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Marianne Lamont Horinko, Administrator
U.S. Environmental Protection Agency
P.O. Box 1473
Merrifield, VA 2216

Attn: Chemical Right-to-Know Program

Re: EPA comments on the Test Plan and Robust Data Summary for 1,5,9-Cyclododecatriene

Dear Administrator Horinko,

E. I. du Pont de Nemours & Company, Inc. received EPA's comments on the test plan and robust data summary for 1,5,9-Cyclododecatriene and is pleased to respond. We have considered the recommended revisions to physiochemical data, environmental fate, and eco-toxicity. We have revised our submittal as needed on the attached summary sheet. Also included with this submittal is a revised robust data summary.

With this submission we have completed the required data set and fulfilled our HPV commitment for this chemical.

Please feel free to contact me with any questions or concerns you may have with regards to this submission at Edwin.L.Mongan-1@usa.dupont.com or by phone at 302-773-0910.

Sincerely,

Edwin L. Mongan, III
Manager, Environmental Stewardship
DuPont Safety, Health & Environment

Cc: Charles Auer – U.S. EPA
Office of Pollution Prevention & Toxics
U. S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

1,5,9-Cyclododecatriene: Response to EPA Comments

Physiochemical Data

EPA comment: The submitter needs to provide the method and other experimental details for melting point, boiling point, and water solubility.

Response: No additional information was available.

EPA comment: *Melting Point.* If possible, the submitter needs to address the difference between the melting point value of 10^0C and the other two values of -17^0C and -15^0C.

Response: The only value reported was -17°C, therefore no action is necessary.

Environmental Fate (photodegradation, stability in water, biodegradation, fugacity).

EPA comment: In the stability in water section, the submitter provided data on volatilization from water, but no information on hydrolysis. Although this chemical is not expected to hydrolyze in water, the submitter needs to state and explain this in the existing robust summary.

Response: Requested data were added to the robust summary.

Ecotoxicity (fish, invertebrates, and algae).

EPA comment: The data submitted for fish, aquatic invertebrates and algae are inadequate for the following reasons: 1) given the volatility of the chemical (Henry's Law constant calculated as 3.32×10^{-2} atm-m^3/mole) the tests should have been conducted in closed systems. 2) The summaries do not indicate whether nominal or measured concentrations of the test substance were used. 3) The tests were conducted using high concentrations of acetone that were above the acceptable limit of 100 mg/L. Therefore, EPA recommends conducting all these tests using closed systems with measured concentrations.

For evaluating volatile chemicals such as 1,5,9-Cyclododecatriene, EPA suggests that the submitter use information from structure-activity relationships (SAR) and information on analogs in order to determine whether available data are reasonable in this case. The use of SAR information to support measured data on 1,5,9-Cyclododecatriene is appropriate and consistent with the HPV Challenge guidance for applying structure-activity relationships.

Response: Where available, data was added to address the missing/requested information regarding measured versus nominal concentrations. The exceedance of the acceptable limit for co-solvent had no effect on the results observed during the studies, based on control results in the cited studies. The available estimated and experimental data indicate that 1,5,9-cyclododecatriene is of medium to high concern for acute toxicity to

aquatic organisms. However, the use pattern for the material (primarily a site-limited intermediate) and its high volatility suggest that the potential exposure for aquatic toxicity is limited and thus the risk to aquatic organisms is also limited. Therefore, no additional aquatic testing will be performed.